

d. Remarks

Claim Amendments

The amendments to claims 1 and 15 are, e.g., supported by the specification at page 8, lines 14 –18, 23-24, 29-30; page 10, lines 8 – 15, 24 – 29; and page 11, lines 17 – 25.

New claims 18 and 19 are supported by the specification at page 11, lines 8 – 11.

Restriction Requirement

Applicants affirm election to prosecute claims 1 – 6 and 15 – 17, i.e., Group I, and do not traverse the restriction.

Anticipation Rejections over ‘501 Patent

Amended claims 1 and 15 respectively recite a detector and a method step both to determine a speed of a portion of the sample.

While the ‘501 patent does teach that biological samples may change in time, the ‘501 patent nowhere discloses a device that measures the motion of a portion of a sample. In particular, the ‘501 patent does not teach a “detector configured to ... to determine a speed of the portion of the interior of the sample” as recited in amended claim 1. Due to the absence of a teaching for this claim feature, the ‘501 patent does not anticipate amended claim 1.

Similarly, the ‘501 patent does not teach a step of “determining a speed of the portion of the interior of the sample from a measurement on the interfering light” as recited in amended claim 15. Due to the absence of a teaching for this claim feature, the ‘501 patent does not anticipate amended claim 15.

Obviousness Rejections over Combination of ‘501 and ‘355 Patents

Applicants agree that the ‘501 patent “acknowledges that there may be motion within samples (‘dynamic biological sample’)” as stated at page 4, lines 2-3 of the Office Action. The ‘501 patent does not however, suggest measuring motion within a sample. To the contrary, the ‘501 patent teaches that such sample motion is a potential difficulty

and problem and that measurement effects associated with this motion should be overcome, i.e., eliminated. In particular, the '501 patent states:

One potential difficulty with the embodiments of the invention discussed up to this point is that a complete two or three-dimensional scan of a sample may take a substantial period of time. While this may be acceptable for samples which do not change with time, ..., it may not be acceptable for biological samples which may change rapidly in time. FIG. 9 illustrates an alternative embodiment of the invention wherein this problem is overcome by scanning the sample in parallel ...

'501 Patent, col. 15, lines 34-43.

Rather than suggesting to measure sample motion, the '501 patent teaches that measurable effects of sample motion should be overcome by making apparatus/methods insensitive to such motion. The '501 patent suggests ways for making scanning optical measurements insensitive to sample motion. For example, the '501 patent states:

However, for certain applications, for example imaging a dynamical biological sample such as the eye, the scanning speed required to do three-dimensional scanning may be such that a parallel scanning technique may be preferable or may be required.

'501 Patent, col. 2, lines 16 - 21.

This suggestion to do parallel scanning is a teaching of a way to reduce the measurable effects of sample motion. These teachings of ways to make apparatus and methods insensitive to sample motion teach away from apparatus and methods that are explicitly configured to measure such motion, e.g., to measure a speed of a portion of the sample, as in amended claims 1 and 15. Due to this teaching away, modifying the '501 patent to arrive at amended claim 1 or 15 would not have been obvious.

Due to the teaching away in the '501 patent, amended claim 1 or 15 would also be non-obvious over a combination of the '501 patent with another prior art reference. On the other hand, the '355 patent does not itself disclose an interferometer that has an acousto-optic modulator in its measurement or reference arm as recited in amended claim 1. Similarly, the '355 patent does not disclose acousto-optically frequency shifting light in the reference arm or measurement arm of an interferometer as recited in amended claim 15. Thus, the '355 patent does not of itself make the invention of amended claim 1 or the invention of amended claim 15 obvious.

For the above reasons, independent claims 1 and 15 are non-obvious as presently amended. Dependent claims 3-6 and 16-19 are non-obvious, at least, due to their

dependence on non-obvious base claims.

Conclusion

Applicants respectfully request allowance of claims 1, 3 – 6, and 15 - 19 as presently amended.

In the event of any non-payment or improper payment of a required fee, the Commissioner is authorized to charge or to credit **Lucent Technologies Deposit Account No. 12-2325** to correct the error.

Respectfully,

By 

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